



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,444	11/25/2003	Floyd D. Simpson	CE11066J1121 (79068)	7126
24273	7590	09/23/2005	EXAMINER	
MOTOROLA, INC INTELLECTUAL PROPERTY SECTION LAW DEPT 8000 WEST SUNRISE BLVD FT LAUDERDAL, FL 33322			LAM, DUNG LE	
			ART UNIT	PAPER NUMBER
			2687	
DATE MAILED: 09/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,444

Applicant(s)

SIMPSON ET AL.

Examiner

Dung Lam

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-5, 8-10, 16-19, 20, 17-19 and 21** are rejected under 35 U.S.C. 102(e) as being anticipated by *Liu et al* (US Pub. No. 2004/0190467).
3. Regarding **claim 1**, *Liu* teaches a method for use by a subscriber unit to select a time to receive a transmission from a wireless local area network access point using a shared wireless communication resource (Abstract), comprising:
- receiving a beacon transmission from the access point comprising first information that corresponds to times when other subscriber units are proposing to utilize the shared wireless communication resource (para. 26 and 28);
- using the first information to select a particular time to receive data from the access point using the shared wireless communication resource (para. 27).
4. Regarding **claim 8**, *Liu* teaches a method for use by a wireless local area network access point to facilitate reception of transmissions from the access

Art Unit: 2687

point by subscriber units using a shared wireless communication resource (Abstract), comprising: receiving transmissions from a plurality of subscriber units, wherein the transmissions include information that identifies proposed times when each of the plurality of subscriber units proposes to utilize the shared wireless communication resource (station may adjust its expected time for data reception para. 94) including schedule information that corresponds to at least a part of the information in a beacon transmission to the subscriber units (para. 26 and 28), such that at least one of the subscriber units can utilize the schedule information to schedule a sleep mode of operation that is consistent with data reception at a selected particular time (para. 82, 84 and 87).

5. Regarding **claim 16**, Liu teaches a method for permitting subscriber units using a shared wireless communication resource to utilize a wireless local area network access point (Abstract), comprising: at various of the subscriber units: transmitting to the access point information that corresponds to proposed transmission times for at least some of the various of the subscriber units (para. 26 and 28); at the access point: using the information to form a message (para. 13, beacon frame); transmitting the message in a beacon transmission to the subscriber units; at least one of the subscriber units: receiving the beacon transmission; using the message to select a first particular time (para. 84 and 87) at which to shift from a sleep mode of operation to an active mode of operation (para. 26, schedules of wake up time).

Art Unit: 2687

6. Regarding **claim 2**, **Liu** teaches all the limitations in claim 1. Liu further teaches that the step of receiving a beacon transmission occurs at a scheduled time (para. 26).

7. Regarding **claim 3**, **Liu** teaches all the limitations in claim 2. Liu further teaches that receiving the beacon transmission at a scheduled time further comprises altering a subscriber unit's operating mode from a sleep mode of operation to an active reception mode of operation (para. 26, schedules of wake up time).

8. Regarding **claim 4**, **Liu** teaches all the limitations in claim 1. Liu further teaches the step of using the first information to select a particular time to wake up to receive data (para. 22).

9. Regarding **claims 5 and 20**, **Liu** teaches all the limitations in claim 1 and 16 respectively. Liu further teaches the shared wireless communication resource comprises an 802.11 compliant shared wireless communication resource (para. 26).

10. Regarding **claim 9**, **Liu** teaches all the limitations in claim 8. Liu further teaches the step of receiving transmissions from a plurality of subscriber units comprises receiving the transmissions during a contention portion of a beacon interval (para. 47).

11. Regarding **claim 10**, Liu teaches all the limitations in claim 8. Liu further teaches the step of including schedule information that corresponds to at least a part of the information in a beacon transmission to the subscriber units comprises identifying specific times when each of the plurality of subscriber units has proposed to make a transmission (station may adjust its expected time for data reception para. 94).

12. Regarding **claim 17**, Liu teaches all the limitations of claim 16. He further teaches the step of using the message to select a first particular time at which to shift from a sleep mode of operation to an active mode of operation comprises a subscriber unit that did not propose a transmission time to the access point using the message to select a first particular time at which to shift from a sleep mode of operation to an active mode of operation (para. 26, schedules of wake up time).

13. Regarding **claim 18**, Liu teaches all the limitations of claim 16. He further teaches the step of using the message to select a first particular time at which to shift from a sleep mode of operation to an active mode of operation of a subscriber unit that did propose a transmission time to the access point using the message to select a first particular time that is different from any of the proposed transmission times (para. 94).

14. Regarding **claim 19**, Liu teaches all the limitations of claim 16. He further teaches the step of transmitting to the access point information that corresponds to proposed transmission times comprises transmitting to the access point during a beacon interval (para. 26 and 28).

Art Unit: 2687

15. Regarding **claim 21**, Liu teaches all the limitations as in claim 16. He further teaches the step using the information to form a message that includes all of the proposed access times from each of the subscriber units (para. 27 and 28).

16. Claim **22** is rejected under 35 U.S.C. 102(e) as anticipated by **van bokhorst et al** (US Patent. No. 6192230).

17. Regarding **claim 22**, **van Bokhorst** teaches a subscriber unit for use with a wireless local area network access point using a shared wireless communication resource, comprising: a shared wireless communication resource compatible transceiver (30, Fig. 2); a controller (Fig. 9, 246 and 247) having at least an active mode of operation and a sleep mode of operation and being operably coupled to the transceiver (47, Fig. 2); a memory (36, Fig. 3) operably coupled to the controller having, at least from time to time, stored therein (col 7 lines 25-49): a plurality of proposed times at which other subscriber units have proposed to utilize the shared wireless communication resource; a first scheduled time at which the controller will shift from the sleep mode of operation to the active mode of operation (250, Col. 7); a second scheduled time at which the controller will cause the transceiver to receive data (252, Col. 7) as transmitted by the access point.

Claim Rejections - 35 USC § 103

Art Unit: 2687

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims **6, 7, 11-13, 15, 23-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Liu et al* (US Pub. No. 2004/0190467) in view of **Haddad** (US Pub. No. 2004/0013135).

20. Regarding **claim 6**, **Liu** teaches all the limitations in claim 1. However, **Liu** does not teach a step of reselecting a new reception time if the first selected time is not available. In an analogous art, **Haddad** teaches that the AP informs each wireless station of the allocation status via the beacon packet and additional time slots can be allocated for their retransmission (para. 39). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine **Liu's** teaching of the time reception scheduling with **Haddad's** teaching of retransmission opportunity for ensure the integrity of the data transmission and thus increases the quality of service.

21. Regarding **claim 7**, **Liu and Haddad** teach all the limitations in claim 6. However, they do not explicitly teach the step of receiving another beacon transmission from the access point that corresponds to times when other subscriber units are proposing to utilize the shared wireless communication resource; using the second information to select a new particular time to receive

data from the access point using the shared wireless communication resource.

Nonetheless, **Haddad** teaches that the AP informs each wireless station of the allocation status via the beacon packet and additional time slots can be allocated for their retransmission (para. 39). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Liu's teaching of the time reception scheduling with **Haddad's** teaching of allowing the station to reselect another transmission opportunity to make sure the transmission is successful and thus increases the quality of service.

22. Regarding **claim 11, 12, and 13**, **Liu** teaches all the limitations in claim 10. However, he fails to teach that identifying specific times comprises identifying a particular moment in a real-time sequence, which is a time slot for a particular event. In an analogous art, **Haddad** teaches that from the beacon packet the AP assigns time slots for the stations to do data transmission (para. 39). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Liu's teaching of the time reception scheduling with **Haddad's** teaching of allowing the station to select a specific real-time time slot to give the station the flexibility of transmitting when necessary.

23. Regarding **claim 15**, **Liu** teaches all the limitations in claim 12. However, he fails to explicitly teach that the scheduling information identifying specific times even when none of the plurality of subscriber units have proposed to make

Art Unit: 2687

a transmission. Nonetheless, it is typical for systems to also include default settings so that the uplink and downlink communications can be minimized.

24. Regarding **claims 23-25**, they are similar to claims 16 and 17. Therefore, they are rejected for the same reasons as claims 23-25.

Citation of Prior Art

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meier et al (US Publication No. 2005/0018624) discloses a method of uniform power saving for 802.11e stations.

Chen et al (US Publication No. 2004/0253996) discloses a method of power saving in wireless local area networks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

09/9/19/2005


9/13/05
LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER